Enclosure

Project Description

The proposed project involves modification of the existing facilities at Holcim's Hagerstown, MD facility. The modifications will include: converting the existing long-dry kiln to a pre-heater/pre-calciner configuration, including two new high efficiency membrane baghouses for particulate matter control and dry lime injection for SO_2 control; a new clinker cooler and the reconfiguration of associated appurtenances to accommodate the new equipment; modifications to the existing finish and raw mills; reconfiguration of the fuel handling system to accommodate the new kiln; upgrades to the filter/dust collection system; a new 800 kw diesel fired emergency generator. The Hagerstown plant is located in Washington County, MD, which is in attainment for all criteria pollutants except $PM_{2.5}$. Additionally, Washington County is part of the ozone transport region.

Comments

1. According to MDE's technical review, Holcim has determined (and MDE agrees) that the proposed modification will result in a significant net increase of carbon monoxide (CO), and greenhouse gases (GHGs), thus triggering PSD requirements for only those pollutants. Based on the information submitted, EPA agrees. However, the methodology employed to reach this determination appears to be incorrect. Page 8 of the "Review of a permit to Construct Application" states that "...the ***projected emissions*** (emphasis added) of PM_{10}, PM, NO_2, SO_2, CO, and GHG are greater than the significant emissions rate for each pollutant. Therefore, a Step 2 Net Emissions Increase Analysis is required..." This is incorrect. A Step 1 analysis involves comparing baseline actual emissions to the emissions increase from the project at hand. If the increase over the baseline is above the significant emissions rate for any pollutant, then a Step 2 netting analysis is required. In the case of NO_2, for example, future emissions from the modified kiln are reported to be 765 tpy. Emissions from the 2005-2006 baseline period are reported to be 1938 tpy. While it is correct that emissions decreases are not considered during Step 1, it is not correct to consider this a 765 tpy increase. The NO_2 increase from the kiln modification should be zero. Continuing the analysis this way for the other new/modified sources associated with the project appears to result in a determination that the project will not result in a significant increase in emissions of NO_2, or any pollutant other than CO or GHG. Therefore, a Step 2 netting analysis is not necessary for any pollutant other than CO and GHG. The same appears to be true for the nonattainment NSR applicability determinations for NOx (as a precursor to ozone) and $PM_{2.5}$. The PSD and nonattainment NSR applicability determinations should be revised accordingly.

2. The PSD approval includes GHG BACT limits of 0.94 tons (1880 lbs) CO_2 per ton of clinker, per calendar year average, as well as 799,056 tons of CO_2e per calendar year from the 5-stage pre-heater/pre-calciner kiln and the new generator. EPA has a number of concerns regarding these limits. First, calendar year averaging periods are not practically enforceable. A 12-month averaging period is acceptable, but it must be rolled monthly, not based on a calendar year. Second, the ton per clinker limit should be expressed in term of CO_2e. The PSD determination states that the methane and nitrous oxide emissions are "insignificant." EPA does not necessarily agree with this assessment, and the record does not support it. Please quantify the

methane and nitrous oxide emissions, and revise the permit so that ton per clinker permit is expressed in terms of CO_2e. Additionally, we note that the Universal Cement permit in Illinois (EPA Region V) contains a BACT limit of 1860 lbs CO_2e/ton clinker, which is lower than what is proposed at Holcim, and is expressed in terms of CO_2e. The permit should be revised accordingly, or the record should be revised to justify the difference.

Comments Relating to the Modeling Analysis

1. **Appendix G, Section 3.2 Meteorological Data**

   In the future, the applicant should survey nearby National Weather Service (NWS) surface sites to determine if a more representative site is available for modeling analyses. EPA recognizes that the facility has used the Baltimore-Washington Airport in previous modeling analyses and that using another NWS surface site would represent a deviation from past practices.

2. **Appendix G, Section 3.4 Receptor Grid**

   Given the long property boundary and public roads and access areas within Holcim's property boundary, the applicant should provide some assurances that the model receptor grid accurately reflects the definition of ambient air.

3. **Appendix G, 3.7.3. Source Parameters and Emission Rates**

   Please clarify if the stack parameters listed in Table 3.2 represent a new stack or emissions from an existing stack. The 2011 National Emission Inventory or NEI for Holcim contains only one stack that is on the order of the stack height listed in this table. The 2011 NEI includes only two (2) CO sources for Holcim and their stack heights are substantially lower than the stack used in the modeling analysis.